CCB Meeting Decision Summary

Thurs., July 8, 2004
9:00a.m.
Rockledge 1
Fifth Floor Conference Room

Requests	Covered					
Submitted To CCB by	**Request Title (Task Headline**	**System / Subsystem**	**User Impact (Severity)**	**Request ID**	**Request Status (Task State)**	**Additional Notes**
Amir Venegas	Breakout of DB Accounts for Internal Applications	J2EE Internal / PGM		CQERA00019256	CCBSubmitted	

Request and Decision Summary

CQERA00019256

1. Summary

Task Id: CQERA00019256
Submitted to CCB by: Amir Venegas
Date Submitted To CCB: 2004-06-29 00:00:00
Request Description (Task Headline): Breakout of DB Accounts for Internal Applications
Severity:
System: J2EE Internal
SubSystem: PGM
Recommended Timeframe (Target Test Deploy Date):
CCB Approval Counts: 0
Request Status (Task State): Approved
Notes:
Creating individual accounts will allow for efficiency in troubleshooting by helping track a problem down by application. Right now it is difficult to figure out where a problem is originating because multiple applications are in a shared database. Another advantage of having separate accounts for shared services is that it will allow for enhanced security in the future so if one account is compromised, not everything is compromised. There will be some code changes and triggers but the change will be clear cut. The change will be done one business application at a time, with development requiring 50 hours per business application. Eight business areas will be affected. All applications will not be tested at once. An implementation plan is needed for roll out. In addition, an updated application security architecture plan needs to be developed.

2. Description and Justification

Description:

At the present time, all internal ERA J2EE applications connect to the database with the same database account, ERAAPPS. Application security, including user authentication and access controls are handled programmatically, after the eraapps DB user establishes a DB connection from the J2EE container.
The Oracle database has many tools for troubleshooting database/application problems.
Many of these tools/views filter by schema/database account.
Since all of the internal applications share the same database account, it is often very difficult to determine the origin (which application) of problems once they are detected.
Having one account for all applications inhibits quick identification and resolution of application problems. For example, when a database lock is detected, there is not a quick way to determine which ERA J2EE application is causing the problem.
Every application has its own logging file that tracks application errors.
Sometimes, when a database problem is detected, the only way to identify which application is causing the problem is to evaluate several application logs.
This is an inefficient way to troubleshoot.

Another problem with having a shared database account for multiple applications is that it provides no flexibility in terms of utilizing some of Oracle's built in access controls, security mechanisms, database triggers, and resource limitations, such as query time and CPU utilization. There may be cases where the requirements of one application conflict with another, and having separate database accounts will allow developers more flexibility in implementing such requirements as auditing, automatic trigger execution, and application security requirements.

It is suggested that the following new database accounts be created:

Application/Container Name	Database Account Name
CM	ERACM
GCM	ERAGCM
IPF	ERAIPF
PGM	ERAPGM
ICADMIN	ERAICADMIN
WEBQT	ERAWEBQT
CGAPRR	ERACGAPRR
ERASERVICES	ERAERASERVICES

Initially, these database accounts will have the same configuration as the ERAPPS account.
The new accounts should have the following configuration information:

DB Profile: UNLIMITED
DB ROLES: Connect, resource, eraapps_role
DB Privileges: create session, unlimited tablespace
Default Tablespace: USERS_TS
Temp Tablespace: Temp1_ts (this could be changed for each DB account, and could lead to better performance)

OPS will update Data-sources.xml and create the database accounts.

CM will need to rebuild each of the applications once the change is promoted to test and stage.
All internal APPs DO NOT have to be done at the same time.
Development will need to do an assessment to determine if the DB username is hardcoded anyplace besides the framework.properties file, and change their data-sources files.

Architecture has approved this recommended change.

It is recommended that the developers immediately start using the new account info, and then promote the change throughout the other deployment cycles.

This change will enhance troubleshooting, provide more flexibility for monitoring, and provide more flexibility in terms of security options. It may also have a performance impact, as there will be multiple Connection pools instead of one, and balance the DB load across multiple DB Pools.
OPS will need to modify data-sources.xml deploy containers. (this will be part of a normal deployment, it will go through a normal deployment cycle, as well as additional regression testing.)
OPS has done the analysis to determine what DB triggers need to be modified, and this should be fairly simple exercise.

Justification:
This change will enhance troubleshooting, provide more flexibility for monitoring, and provide more flexibility in terms of security options. It may also have a performance impact, as there will be multiple Connection pools instead of one, and balance the DB load across multiple DB Pools.

3. Level of Effort

Impacted Group	LOE Time	Accessor
Analysis	4	
Development	50 per b.a.	Peter Ly
Integration Test	?	
Acceptance Test	?	
Operation	7	Steve Fitzgerald

Overall Impact Assessment
OPS will need to modify data-sources.xml deploy containers. (this will be part of a normal deployment, it will go through a normal deployment cycle, as well as additional regression testing.)
OPS has done the analysis to determine what DB triggers need to be modified, and this should be fairly simple exercise.

4. Associated Defects

Defect Id	Defect Headline

5. Associated Sub Tasks

Task Id	Task Headline

6. Associated Issues

Issue Id	Issue Headline